

## **Appendix D**

### **Visual Assessment Methodology**

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This appendix provides further details about the methods used to conduct the visual impact assessment for the plant and the transmission line.

#### **Evaluation Methods and Existing Conditions for Generation Plant Site**

The evaluation methods for this visual impact assessment consisted of

- categorizing the existing landscape and visual setting within 5 miles of the principal project components (power plant, natural gas pipeline, and makeup water supply pipeline);
- characterizing the potential views of project features, identifying visual sensitivity, and determining the expected visibility of the project facilities at specific locations (key viewpoints);
- establishing criteria for determining the significance of potential visual impacts;
- identifying the overall degree of visual change (contrast) introduced by the project facilities, based primarily on visual simulations of the appearance of the facilities;
- assessing the visual impacts of the project from key viewpoints; and
- recommending visual mitigation measures, as appropriate.

Maps and aerial photographs were reviewed and on-the-ground reconnaissance was carried out to identify the visual quality and viewer sensitivity in the area.

#### **Visual Quality**

“Visual quality” is a way to describe the landscape pattern that results from combinations of rural/natural features and human features. Three visual quality categories (urban/industrial, rural, and unique distinctive) were defined. These categories were applied to two intervals of distance: 0 to 1 mile from the project facility, and 1 to 5 miles from the project facility.

The visual quality categories are described as follows.

- **Urban/Industrial** – The landscape is common to urban areas and urban/industrial fringes. Human elements are prevalent or landscape modifications exist that do not blend with the natural surroundings (resulting in low visual intactness and unity).

- Rural – The landscape exhibits reasonably attractive natural and human features/patterns, although they are not visually distinctive or unusual within the region. The landscape integrity of the area provides some positive visual experiences such as natural open space and agricultural areas.
- Unique/Distinctive – The landscape exhibits distinctive and memorable visual features, such as landforms, rock outcrops, or other patterns that are largely undisturbed. These usually occur in a rural or open space setting. Few if any human developments are present.

## **Visual Sensitivity**

“Visual sensitivity” was characterized by considering the type of area from which a view occurs, the duration of exposure to the view, and the dominance of exposure. Three categories were established:

- Low – Views from agricultural or industrial areas where the duration of the view is short and the view may be partially obscured by topography, landscaping, or structures.
- Moderate – Views from highways and local roads where the duration of the view is short to moderate, many of the viewers are frequent users of the travel route, and visual sensitivity could be constrained because orientation of the viewer is focused elsewhere for much of the time.
- High – Long duration views from residential and recreational areas. Views include elements that dominate the landscape.

## **Evaluation Methods and Existing Conditions for Transmission Line**

### **Evaluation Methods**

The following visual assessment process was used to evaluate the impacts of placing the proposed transmission line in the landscape.

- Identify distinct areas (called visual assessment areas) that have internally consistent visual conditions along the corridor.
- Assign visual management objectives (preserve, allow visual change of low contrast, allow visual change of high contrast) to each visual assessment area by evaluating representative views.
- Assess the proposal’s impact for each visual assessment area by comparing representative views of existing conditions to simulated views with the proposed transmission line place.

The BLM method has been adapted to assess the potential visual impacts of a linear transmission line project (BLM 1980). Modifications to the method include dividing the project area into visual assessment areas and using key views to depict the existing and proposed conditions from a representative location in each visual assessment area. Views beyond the transmission line corridor such as highways, areas west of the Columbia River, the Columbia River, and the areas east of the nearby transmission line corridor were assessed using BLM visual resource management concepts.

Data collected included U.S. Geological Survey quadrangle maps, aerial photographs, surface photographs, and project maps. Fieldwork consisted of driving and hiking project areas to qualitatively determine visibility of the proposed transmission line and related facilities from residences, major roads, and other potentially sensitive views.

## **Establishment of Visual Resource Management Classes**

The BLM method has three factors to consider in evaluating a view: scenic quality rating, sensitivity level, and distance zones.

- Scenic quality is a measure of the visual appeal of a tract of land (represented in this analysis by observing the area from several important viewpoints). In the visual resource inventory process, lands are given an A, B, or C rating based on the apparent scenic quality which is determined using seven key factors: landform, vegetation, water, color, adjacent scenery, scarcity (common or rare), and cultural modifications. The rating system assumes that areas with the most variety and the most harmonious composition have the greatest scenic value. The system also assumes that features of the human environment do not necessarily detract from the scenic value of the landscape. The rating totals are used to classify the scenic quality as: Class A: outstanding, Class B: a combination of outstanding and common, Class C: fairly common to the physiographic region. Although BLM applies a numeric scale to the classes, both a qualitative and quantitative approach was used for this analysis.
- Sensitivity level takes into consideration the frequency of use of an area and the user's perceived degree of concern about proposed changes in scenic quality. Each area is rated as having high, medium, or low sensitivity. Sensitivity level analysis is used as an estimate of public concern for scenic quality. Six factors are used to evaluate sensitivity: types of users, amount of use, public interest, adjacent land uses, special land use areas, and other factors (e.g., research or studies indicating visual sensitivity). Each factor is assigned a rating of high, medium, or low, then an overall rating is given based on the ratings for the six factors.
- Distance zones are based on the level of visibility of the proposed corridor within the landscape from major viewing routes and observation points. Distance zones allow the consideration of the proximity of the observer to the project features. A particular scene is assigned one of three ratings. Foreground/middleground includes areas seen from highways, rivers, or other viewing locations to a distance of 3 to 5 miles. Background includes areas beyond the foreground-middleground but usually less than 15 miles away. Seldom seen areas are those that are normally hidden from view.

Through this inventory process, the visual assessment areas were assigned one of five visual resource management classes. The management classes are used to indicate the level of disturbance that is existing or that would be allowed. The classes and their associated management objectives are as follows.

- Class I is a special classification assigned to congressionally designated superb features such as national wilderness areas or wild sections of national wild and scenic rivers. The management objective is to preserve the existing character of the landscape. The level of change to the characteristic landscape should be very low and must not attract attention.
- Class II includes areas of outstanding scenic quality, high visitor sensitivity, and is viewed as foreground or middleground. The management objective is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low.
- Class III are areas with outstanding and common scenic qualities, with moderate viewer sensitivity. The management objective is to partially retain the existing character of the landscape. The level of change to the characteristic of the landscape should be moderate.
- Class IV includes areas with features more common to the physiographic area that has either low viewer sensitivity or is viewed only as background or is seldom seen. The management objective is to provide for management activities that require major modifications of the existing character of the landscape. The level of change to the characteristic landscape can be high.

## **Visual Quality**

In addition to applying the BLM visual resources methodology, existing visual qualities were evaluated with qualitative descriptions. Visual quality is described as the visual patterns created by the combination of rural character landscapes and industrial and human-made features. Visual quality was evaluated using the following descriptions:

- Urban/Industrial – The landscape is common to urban areas and urban/industrial fringes. Human elements are prevalent or landscape modifications exist which do not blend with the natural surroundings (low visual intactness and unity).
- Rural – The landscape exhibits reasonably attractive natural and human-made features/patterns, although they are not visually distinctive or unusual within the region. The landscape integrity of the area provides some positive visual experiences such as the presence of natural open space intermixed with existing agricultural areas (farm fields, etc.), or well-maintained, landscaped urban areas.
- Unique/Distinctive – The landscape exhibits distinctive and memorable visual features (landform, rock outcrops, etc.) and patterns (vegetation/open space) that are

largely undisturbed – usually a rural or open space setting. Few, if any, human-made developments are present.

## **Viewer Types and Sensitivity**

Each view was given a sensitivity level rating which reflects public concern for scenic quality. It is important to note that all seven views analyzed in the EIS were identified within the foreground/middleground zone. After the distance zone was established, the views were assigned high, medium, or low sensitivity after analyzing the various indicators of public concern such as types of users, amount of use, public interest, adjacent land uses, special land use areas, and other factors (e.g., research or studies indicating visual sensitivity).

## **Key Views and Simulations**

Visual simulations of the proposed project were developed for each assessment area. The simulations are based on photographs taken at the various locations.

## **Contrast Rating**

To evaluate potential visual impacts, contrast ratings were assigned to each view by considering distance, angle of observation, length of time project is in view, relativity to size or scale, season of use, light conditions, recovery time, spatial relationships, and atmospheric conditions. Contrast that would be created by the proposed transmission line was then rated as follows.

- Strong: The contrast demands attention, would not be overlooked by the average observer, and is dominant in the landscape.
- Moderate: The contrast begins to attract attention and begins to dominate the characteristic landscape.
- Weak: The contrast can be seen but does not attract attention.
- None: The contrast is not visible or not perceived.

## **Comparison with Visual Resource Management Class Objectives**

The projected level of contrast was compared to acceptable levels of contrast for the visual resource class of the view. The four levels of contrast (none, weak, moderate, and strong) roughly correspond to Classes I, II, III, and IV, respectively. This means that a “strong” contrast rating may be acceptable in a Class IV area but probably would not be acceptable in a Class III area. Acceptable degrees of contrast for each visual resource class are based on BLM definitions:

- Class I: Acceptable contrasts are primarily natural ecological changes.

- Class II: Contrasts may be seen but should not attract the attention of the casual observer.
- Class III: Contrasts may attract attention but should not dominate the view of the casual observer.
- Class IV: Contrast may dominate the view and be the major focus of viewer attention.

## **Impact Levels**

Impacts were classified as high, moderate, or low based on the degree of contrast of the project compared to the acceptable level of contrast for that visual resource management class. The following impact levels are used.

- High: Contrast from the project is substantially greater than acceptable.
- Medium: Contrast is somewhat greater than acceptable for the visual resource class.
- Low: Contrast is acceptable for the visual resource class.
- No Impact: Visual contrast is not perceptible.